

REMARKS

This Amendment responds to the Office Action dated January 31, 2006 in which the Examiner rejected claims 7 and 9-14 under 35 U.S.C. §112, second paragraph, and under 35 U.S.C. §103.

Applicants respectfully request the Examiner considers the Information Disclosure Statements filed May 11, 2006 and December 21, 2004.

As indicated above, claim 7 has been amended to correct a minor informality. Therefore, Applicants respectfully request the Examiner withdraws the rejection to the claims under 35 U.S.C. §112, second paragraph.

As indicated above, claim 7 has been amended in order to make explicit what is implicit in the claim. The amendment is unrelated to a statutory requirement for patentability.

Claim 7 claims a method of manufacturing electronic parts, comprising providing a holding jig made of an elastic material, wherein at least one surface of the elastic material is adhesive, mounting a substrate on the holding jig by an adhesive strength of the surface of the elastic material, mounting an element onto the substrate and electrically connecting the element to the substrate while the substrate is held on the surface of the elastic material, and applying ultrasonic waves to a bonding portion at which the electric connection is performed.

Through the method of the claimed invention, electrically connecting an element to a substrate while the substrate is held on the surface of an elastic material and applying ultrasonic waves to a bonding portion at which the electric connection is performed, as claimed in claim 7, the claimed invention provides a method of manufacturing electronic parts which prevents the generation of

electrostatic charges. The prior art does not show, teach or suggest the invention as claimed in claim 7.

Claim 7 was rejected under 35 U.S.C. §103 as being unpatentable over *Kazuhiko et al.* (JP 07-022795) in view of *Arikado et al.* (JP 11-045912).

Kazuhiko et al. appears to disclose in paragraph [0020] providing a flexible printed circuit board on an adhesive silicone rubber layer. The flexible printed circuit board (FPC substrate) is made from polyimide on which a copper circuit pattern was formed. The FPC substrate is flattened, immobilized and screen-stenciled with a cream pewter. An electronic part is then provided thereon and then put into a hot-air-drying furnace in which the pewter is reflowed. Subsequently it is cooled to room temperature and the finished product of the FPC substrate with the electronic part is torn off the fixture.

Thus, *Kazuhiko et al.* merely discloses attaching an electronic part to a flexible printed circuit board substrate using a cream pewter. Nothing in *Kazuhiko et al.* shows, teaches or suggests a) electrically connecting an element to the substrate and b) applying ultrasonic waves to a bonding portion at which the electric connection is performed as claimed in claim 7. Rather, *Kazuhiko et al.* merely discloses providing an electronic part onto a FPC substrate.

Arikado et al. appears to disclose a flip chip 30 is vacuum-chucked by a lower face of a vacuum chuck tool 22 by elastically being clamped with a rib 22a and leaf spring 22. The flip chip 30 is ultrasonically vibrated by a piezoelectric element such that bumps 31 are pressed and bonded to electrodes 33 on a substrate 32.

Thus, *Arikado et al.* merely discloses bonding a bump 31 of a flip chip 30 to electrode 33 of a substrate 32. Nothing in *Arikado et al.* shows, teaches or suggests

a) bonding the elements mounted on a holding jig made of an elastic material as claimed in claim 7. Rather, *Arikado et al.* only discloses that the substrate 32 is mounted on a substrate holder 34 which is mounted on a movable table 35 (see paragraph [0010]).

Additionally, nothing in *Arikado et al.* shows, teaches or suggests electrically connecting an element to a substrate while the substrate is held on the surface of an elastic material and applying ultrasonic waves to a bonding portion at which the electric connection is performed as claimed in claim 7.

A combination of *Kazuhiko et al.* and *Arikado et al.* would merely suggest to mount the electronic part on the flexible printed circuit board and subsequently tear the substrate and electronic part off the fixture as taught by *Kazuhiko et al.* and then to mount the FPC substrate to the movable table 35 of *Arikado et al.* and to ultrasonically bond it to a flip chip 30 as taught by *Arikado et al.* Thus, nothing in the combination of the references shows, teaches or suggests electrically connecting an element to the substrate and applying ultrasonic waves to a bonding portion at which the electronic connection is performed as claimed in claim 7. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claim 7 under 35 U.S.C. §103.

Claims 9, 10-12 and 14 were rejected under 35 U.S.C. §103 as being unpatentable over *Kazuhiko et al.* and *Arikado et al.* and further in view of *Oehmke* (U.S. Patent 4,098,945). Claim 13 was rejected under 35 U.S.C. §103 as being unpatentable over *Kazuhiko et al.*, *Arikado et al.* and *Oehmke* and further in view of Applicants' admitted prior art.

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. §103. The claims have been reviewed in light of the Office Action, and reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in *Kazuhiko et al.* and *Arikado et al.* show, teach or suggest the primary features as claimed in claim 7, Applicants respectfully submit that the combination of the primary references with the secondary references to *Oehmke* and Applicants' admitted prior art would not overcome the deficiencies of the primary references. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 9 and 10-14 under 35 U.S.C. §103.

New claim 18 has been added and recites additional features. Applicants respectfully submit that nothing in the prior art shows, teaches or suggests applying ultrasonic waves while the substrate is held on the surface of the elastic material as claimed in new claim 18. In fact, *Kazuhiko et al.* clearly teaches away from this feature since it teaches removing the flexible printed circuit board once the electronic part is mounted.

The prior art of record, which is not relied upon, is acknowledged. The references taken singularly or in combination do not anticipate or make obvious the claimed invention.

Thus, it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the Applicants'

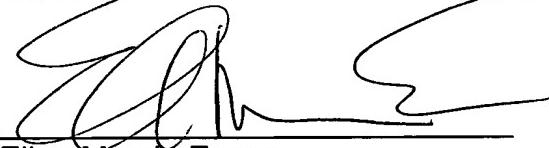
undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

BUCHANAN INGERSOLL PC



By:

Ellen Marcie Emas
Registration No. 32131

Date: June 29, 2006

P.O. Box 1404
Alexandria, VA 22313-1404
703.836.6620